EnGenius®

DATASHEET

ESR9855G

Wireless 300N Gigabit Gaming Router

2.4GHz Gigabit Ethernet / Stream Engine 11N 2x2 (300Mbps)

Package Contents

- 300N Gigabit Gaming Router
- Switching Power Adapter
- CAT5 Ethernet Cable
- CD with User's Manual & Smart Wizard
- 3dBi Dipole Antennas
- Quick Guide

ESR9855G is a Media Enhanced 11N Gaming Router. ESR9855G supports home network with superior throughput and performance and unparalleled wireless range (3dBi antenna included). With easy to use on the WPS function, it helps users to connect to wireless device with just one push button. Most importantly, the latest StreamEngine technology guarantees real-time multimedia services.

There's also a built-in 4-port 10/100/1000 Gigabit switch to connect your wired-Ethernet devices together. The Router function ties it all together and lets your whole network shares a high-speed cable or DSL Internet connection.

- Stream Engine Support: media-enhanced user experience
- WISH (WLAN Intelligent Stream Handling): smooth streaming wireless data transfer
- Multiple SSIDs: wireless network sharing management
- Gigabit Switch Ports: perfect for internal file sharing
- WDS AP: cross AP communication
- WPS button: easy one-touch-setup wireless security
- UPnP Support: game console compatible
- Upgradeable Antenna: flexible for extending radio coverage

Software Features			
System Status	System Information	Y	System Up Time, Device Name, Wireless MAC, LAN MAC, Country, Current Time, Firmware Version
	Current IP Setting	Y	IP Address, Subnet Mack, Default Gateway, DHCP
	Current Wireless Setting	Y	Operation mode, Wireless Mode, Channel/ Frequency, L2 Isolation, MSSID Setting
Client List	List current associated clients. Show only authorized and associated clients		

System Log	Displays a list of events triggered

Wireless Functional List			
Wireless Radio On/Off button		Y	Software button / Disable or Enable WiFi radio
Operation mode		Y	AP
		Y	Router
		Y	WDS
Switch of 802.11 modes		Y	b/g/n
Channel setting		Y	Manual
		Y	Auto / Best Channel Selection
Transfer rate setting		Y	Auto and Manual
Output Power Control		Y	High / Medium / Low
WMM		Y	
Multiple BSSID (Multi AP)		Y	4 BSSID for 2.4Ghz
		Y	Each BSSID should has its own WiFi & security settings
WPS		Y	WPS : Enable / Disable Wi-Fi Protected Setup Information - WPS Current Status: unConfigured - Self Pin Code: - SSID: - Authentication Mode: Disable - Passphrase Key: - WPS Via Push Button: - WPS via PIN:
Security	WEP	Y	WEP(64/128bit)
	WPA/ WPA2	Y	WPA-PSK(Personal),WPA2-PSK(Personal),WPA/WPA2-PSK(Personal), WPA-EAP(Enterprise), WPA2-EAP(Enterprise),WPA/WPA2-EAP(Enterprise)–
	TKIP/ AES	Y	TKIP / AES
	Hidden ESSID	Y	
	MAC address filtering	Y	MAC address filtering (Both in WLAN and LAN), up to 50 field

	L2 Isolation	Y	
	802.1x Authenticator	Y	MD5/ TLS/ TTLS, PEAP (Nice to Have)

Functional List				
LAN Settings			Y	IP (check validity and DHCP server IP range) MAC
DHCP server			Y	DHCP Range, Lease Time, Client list
Router	NAT/ NAPT		Y	
	Port Forwarding		Y	
	Virtual Server / Port Mapping		Y	Virtual Server: every single IP should support more than one service port (UI forbids that)
	Port Trigger		Y	
	WISH		Y	Wireless Intelligent Stream Handling
	QoS		Y	StreamEngine
	Filtering	URL	Y	URL-Keyword blocking, 20 site can be registered
		IP	Y	IP Filtering with scheduling function
		Port	Y	TCP / UDP
	Block Ping From WAN		Y	Enable / Disable option box
	DMZ		Y	Multiple DMZ records
Dynamic DNS			Y	
UPNP			Y	Universal Plug and Play
MAC Clone			Y	Clone WAN port MAC supported / Change in WAN side MAC address
WAN side form	PPPoE		Y	PAP/CHAP/MS-CHAP / MS-CHAPV2
			Y	Always (keep trying if fail)
			Y	On demand / Manual
			Y	Idle Time Out(disconnect if idled for a certain time)
	DHCP Client		Y	
	PPTP		Y	PAP/CHAP/MS-CHAP / MS-CHAPV2
			Y	Always (keep trying if fail)
			Y	On demand / Manual
			Y	Idle Time Out(disconnect if idled for a certain time)

ESR9855G

Wireless 300N Gigabit Gaming Router

2.4GHz Gigabit Ethernet / Stream Engine 11N 2x2 (300Mbps)

	Fixed IP	Y	
Administration		N	User Name
		Y	Password
		Y	Confirmed Password
Backup/ Restore Setting		Y	Save Current Setting Restore Saved Setting Reset to Factory Default
Firmware Upgrade		Y	Firmware Upgrade
Diagnosis		Y	Address to Ping : Ping Frequency : 1 / 3 / 5 / 10 / 15 / 20
Jumbo Frame Support		Y	9216bytes

Technical Specifications

Hardware Specifications

CPU/MAC/BB	Ubicom IP7K	
RF	Atheros AR9223 (2x2)	
Environmental condition	Operation	Temperature 0~40℃／Humidity 90% or less(Nn-condensing)
	Storage	Temperature -10~60℃／Humidity 95% or less (Nn-condensing)
PCB Dimension	154mm x 119mm	
Antenna Connector	SMA Reverse	
Antenna	3dBi External x 2	
LED	Blue LEDs	

RF Specification

Frequency Band	2.400~2.484 GHz
Modulation Technology	OFDM: BPSK, QPSK, 16-QAM, 64-QAM DBPSK, DQPSK, CCK
Operating Channels	11 for North America, 13 for Europe
Wireless Setting	Operation Mode: AP Router Wireless Mode – 11b/ 11g /11n Channel Selection (Setting varies by Country)

ESR9855G

Wireless 300N Gigabit Gaming Router

2.4GHz Gigabit Ethernet / Stream Engine 11N 2x2 (300Mbps)

Channel Bandwidth (Auto, 20Mhz, 40Mhz)

Transmission Rate

11g: Best. 54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, 1 in Mbps

11n:

MCS index	Guard Interval 800ns		Guard Interval 400ns	
	20MHz(Mbps)	40MHz(Mbps)	20MHz(Mbps)	40MHz(Mbps)
0	6.5	13.5	0	6.5
1	13	27	1	13
2	19.5	40.5	2	19.5
3	26	54	3	26
4	39	81	4	39
5	52	108	5	52
6	58.5	121.5	6	58.5
7	65	135	7	65
8	13	27	8	13
9	26	54	9	26
10	39	81	10	39
11	52	108	11	52
12	78	162	12	78
13	104	216	13	104
14	117	243	14	117
15	130	270	15	130

Receive Sensitivity (Typical)

2.4G Radio (b/g/n)

IEEE802.11n

MCS0~15 @ optimal -90dBm

IEEE802.11g

6~54Mbps@ optimal -90dBm

IEEE802.11b

1~11Mbps@ optimal -93dBm

Available transmit power

2.4G Radio (b/g/n)

IEEE802.11N

MCS 0~15@ up to 18dBm

IEEE802.11g

6~54 Mbps@ up to 18dBm

ESR9855G

Wireless 300N Gigabit Gaming Router

2.4GHz Gigabit Ethernet / Stream Engine 11N 2x2 (300Mbps)

	IEEE802.11b 1~11Mbps@ up to 20dBm
Regulation Certifications	FCC Part 15, ETSI 300/328/CE